RAPID REPORT:
Damage to Odesa Transfiguration Cathedral, 23 July 2023

Executive Summary

Analysis of high-resolution satellite imagery has identified significant damage to the Odesa Transfiguration Cathedral (Одеський Спасо-Преображенський кафедральний собор) in Odesa, Ukraine, due to Russia's airstrike on 23 July 2023. This report has been prepared as part of the ongoing effort through the Conflict Observatory to monitor damage and destruction to cultural heritage sites in Ukraine following Russia's invasion in February 2022. The analysis of damage to other cultural heritage sites in Odesa is ongoing and additional confirmed damage is likely.

Background

Russia conducted a series of missile and drone attacks against Odesa starting on 19 July 2023.[1] Reportedly, the attack on 23 July 2023 significantly damaged the Odesa Transfiguration Cathedral.[2] The information for this report was gathered using high-resolution satellite imagery to confirm on-the-ground reporting by the Ukrainian Heritage Monitoring Lab (HeMo).

The church has a long and venerable history. The first temporary plastered church on this site was built in August 1794. A second stone church, located next to the first, was built between 1804 and 1808. The construction of the bell tower, located to the west of the cathedral, was completed in 1837. In 1841, construction of the refectory united the bell tower and the old church.[3] Throughout the late 1800s and early 1900s, construction of the cathedral complex continued. The cathedral accommodated up to 9,000 people in the upper temple and another 3,000 in the lower temple. In 1936, the Cathedral was destroyed. The current Odesa Transfiguration Cathedral was rebuilt between 1999 and 2005 on the site of the cathedral destroyed in 1936.[4] In 2007, it was granted the status of a historical monument of local significance due to the burial of prominent citizens of Odesa and the Southern region of Ukraine including Prince M. S. Vorontsov and Princess E. K. Vorontsova, who were reburied in the cathedral in 2005.[5]

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[1] Arhirova, H. (2023). "Russia strikes Ukraine's critical port facilities in Odesa after halting grain deal," *The Associated Press,* 19 July. Available at: https://apnews.com/article/russia-ukraine-war-odesa-crimea-1676e6e746c888c8c8c1f0e4493be6fa (Accessed: 28 July 2023).

[2] Arhirova, H. and Morton E. (2023). "Russian strike on Ukraine's Odesa badly damages landmark Orthodox cathedral; 1 dead, many wounded," *The Associated Press,* 23 July. Available at: https://apnews.com/article/odesa-missile-grain-deal-ukraine-russia-adc78b45e74e0236125b1ec706e5d7da (Accessed: 28 July 2023).

[3] Самойлов Ф. А. (2009). "Из истории Одесского Кафедрального Спасо-Преображенского собора" // группа авторов Воронцовский сборник: Сборник научных статей / Шкляев И. Н. д. и. н. – Одесса: Студия «Негоциант»,. – Вып. 2–й. – С. 122–128.

[4] Мещеряков В. Н. (2017). "Воссоздание Одесского кафедрального Спасо-Преображенского собора". – Одесса: Феникс. – 464 с.

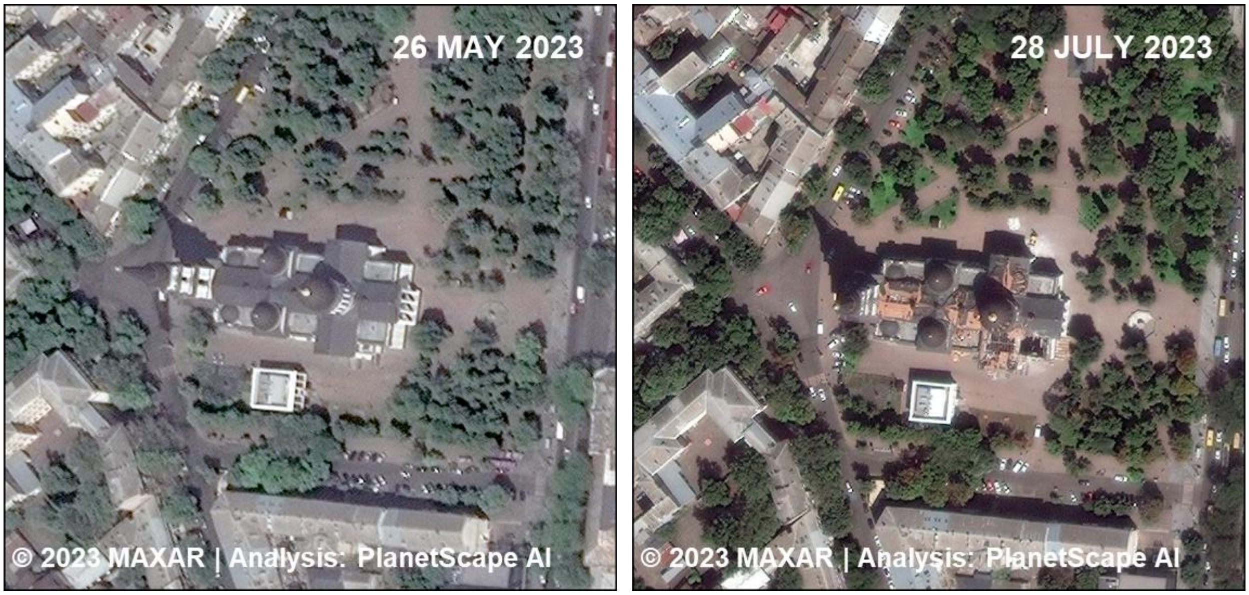
[5] Order of the Ministry of Education and Culture of Ukraine dated 16.06.2007 No. 662/0/16-07.

Findings

Visual analysis of high-resolution imagery detected significant damage to the Odesa Transfiguration Cathedral. This analysis corroborates on-the-ground reporting that the cathedral was damaged on 23 July 2023.

Analysis

A comparison of high-resolution satellite images captured on 26 May and 28 July 2023 (Images 1 and 2) shows damage to the Odesa Transfiguration Cathedral. The image from 28 July corroborates reports that a 23 July airstrike by Russia significantly damaged the cathedral (Images 3, 4, 5).[6] Analysis of moderate-resolution Planetscope imagery (not shown) confirms damage to this site between 21 July and 24 July 2023.


26 MAY 2023
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Images 1 and 2. On the left, a satellite image of the Odesa Transfiguration Cathedral from 26 May 2023 shows an undamaged roof. On the right, a satellite image of the Odesa Transfiguration Cathedral on 28 July 2023 shows the damage to the roof.

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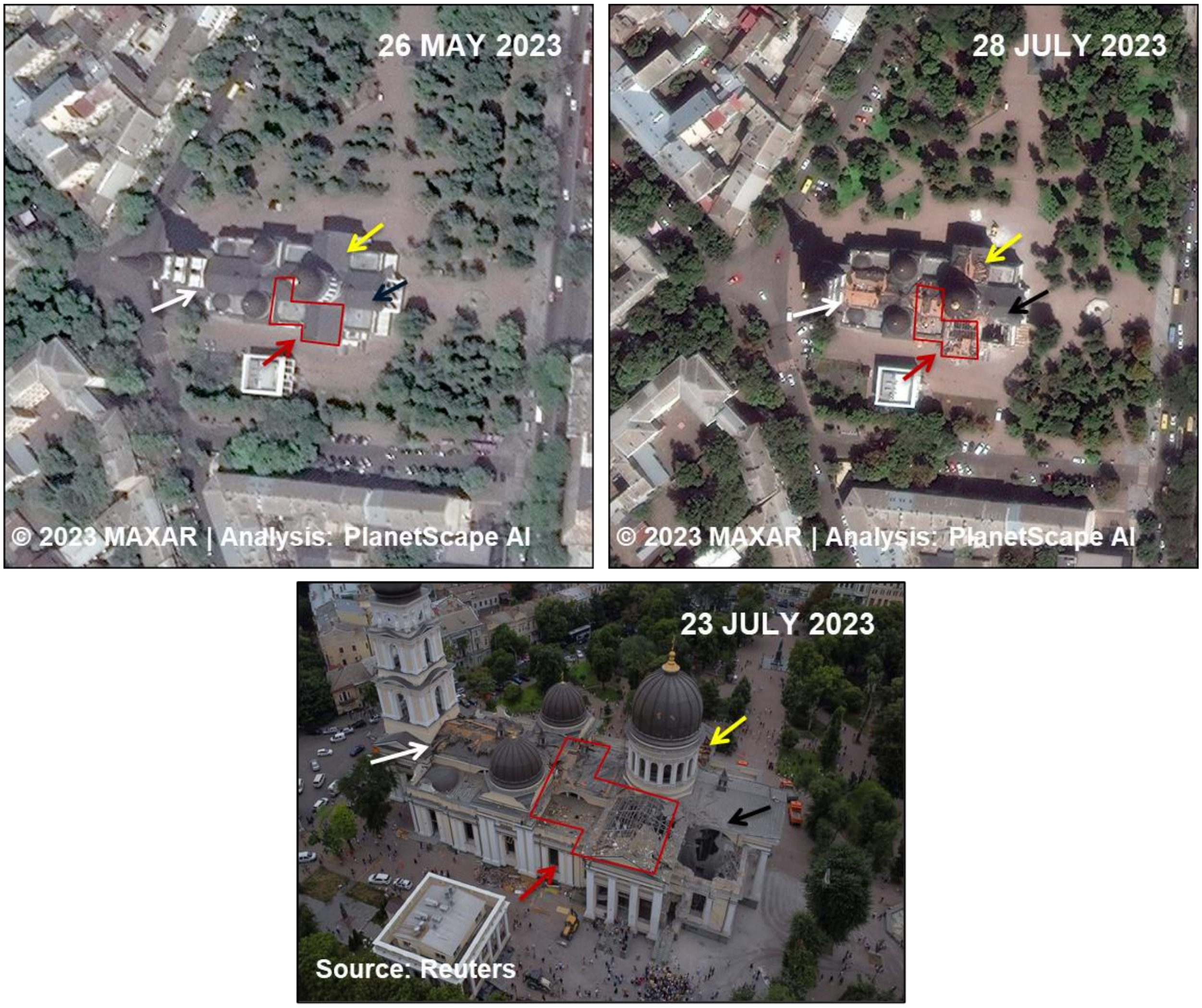
[6] Nazarchuk, I. (2023). “Russian attack on Odesa kills one, damages cathedral,” *Reuters*, 23 July. Available at: www.reuters.com/world/europe/russias-attack-odesa-kills-one-injures-18-ukraine-officials-2023-07-23/ (Accessed: 28 July 2023).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Source: Reuters

Images 3, 4, and 5. Damage to the cathedral visible on satellite imagery matches the damage captured in imagery from on-the-ground reporting on 23 July 2023 by Reuters (white, red, and black arrows). In addition, a larger portion of the damage to the north of the cathedral is visible on satellite imagery (yellow arrow). Annotations showing damage are added by the authors of this report.

This monitoring effort uses cultural heritage inventory data developed by the Ukrainian Heritage Monitoring Lab (HeMo) in Ukraine, the Smithsonian Cultural Rescue Initiative (SCRI) at the Smithsonian Institution, the Cultural Heritage Monitoring Lab (CHML) at the Virginia Museum of Natural History, and the Center for International Development and Conflict Management (CIDCM) at the University of Maryland under the Cultural Heritage Site List (CHSL) data standards developed by the Penn Cultural Heritage Center (PennCHC) at the University of Pennsylvania Museum with National Science Foundation Grant #1439549. Support was provided by the Bureau of Conflict and Stabilization Operations at the U.S. Department of State. Views expressed in this report represent those of the authors alone and do not necessarily reflect the views of the U.S. government. Learn more at https://conflictobservatory.org.

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Satellite data: Planetscope
Acquisition date: 21 July 2023 to 24 July 2023
Resolution: 3.125 meters
Copyright: © 2023 Planet Labs PBC

Satellite data: Maxar
Acquisition date: 28 July 2023
Resolution: 42-centimeter Pan Sharpened Natural Color GeoEye-1 imagery
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Acquisition date: 26 May 2023
Resolution: 50-centimeter Pan Sharpened Natural Color WorldView-2 imagery
Copyright: © 2023 Maxar

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